

## **REMARKS**

Claims 1-102 are all the claims pending in the application. Claims 1, 23, 45, 62, 79, and 91 are the only independent claims.

Applicant notes with appreciation that the IDS papers have been signed and acknowledged by the Examiner in a previous Office Action.

Claims 1-102 stand rejected under 35 U.S.C. §102(e) as being anticipated by Hasebe (5,990,408). Applicant respectfully traverses these rejections, and requests reconsideration and allowance of the pending claims in view of the following arguments.

### **Figure Cover Sheet**

As a preliminary matter, should the Examiner deem the claims of the present application to be allowable, Applicant respectfully requests that figures 51 and 59 be used for the cover sheet on the issued patent; if two Figures are not possible, Applicant respectfully requests that Figure 51 be used as the figure for the cover sheet on the issued patent. The Examiner is invited to telephone the undersigned to discuss alternative figures should it be necessary.

### **“Audio output signal”**

Claim 1 is directed toward a multi-channel signal processing system and recites “wherein each processor of said plurality of signal processors process a received incoming audio electrical signal to produce an audio output signal.” Page 2 of the Office Action relies upon pitch and envelope detection sections 12, 13, 14, and 15 of Hasebe as teaching the identified claim element. Although it is interesting that the Examiner cites to the individually implemented pitch and envelope detection sections, which is a matter of significant contention in related and

currently appealed application Ser. No. 10/703,023, Applicant respectfully disagrees with the Office Action as to the extent of the teachings of the Hasebe patent.

Further, Applicant's review of Hasebe finds that these components provide control signals, not the audio output signal as required by claim 1. This deficiency is similar to that present in the cited Smith patent (6,018,118), which the Examiner asserted in the last Office Action and has since withdrawn. Portions of Hasebe which unambiguously state that the various detection sections 12-15 provide control signals include:

"First envelope data sets detected by the first envelope detection section 12, first pitch data sets detected by the first pitch detection section 13, second envelope data sets detected by the second envelope detection section 14 and second pitch data sets detected by the second pitch detection section 15 are supplied to a control section 16.

The control section 16 executes a picking position detection process to determine picking positions for the six strings 8, using the first envelope data sets and the second envelope data sets."  
(Col. 5, lines 50-60) (Emphasis added).

"As shown in FIG. 5, a first envelope detection section 12 supplies a note-on signal as a strobe signal to a latch 42. The note-on signal is generated when envelope data, that is formed by connecting peak values of an advancing wave detected by the first pickup device, exceeds a predetermined threshold value."  
(Col. 8, lines 62-67) (Emphasis added).

Hasebe has made a distinction between various types of signals provided by assorted components of this system. Some components produce control signals (e.g., elements 12-16) while other components produce tone signals (e.g., ADCs 10 and 11, and signal processing section 19). These tone signals are audio signals, and control signals by all accepted conventions simply are not audio signals.

Moreover, Hasebe provided a specific example with regard to envelope detection sections 12 and 14, such that the patent expressly stated that "first envelope detection section 12 supplies a note-on signal as a strobe signal to a latch 42." (Col. 8, lines 62-67). This "note-on" signal is

most definitely not an audio signal. Moreover, it would not make sense to send an “audio signal” to a latch, such as latch 42. This is clear evidence that envelope detection sections 12 and 14 output control signals rather than an “audio output signal” as called for in claim 1. For these reasons, Hasebe is deficient as an anticipatory reference since it does not teach or suggest the “audio signal output” as required by claim 1.

Applicant yet again emphasizes that control signals and audio signals are completely different types of signals. This is a well-known and elementary principle for which Applicant is fully prepared to submit supporting evidence, should it become necessary in a future Action and in associated and pending appeals.

#### **Clarification requested: control signals vs. audio signals**

In the event the Examiner maintains the just-noted rejection, it is requested that the Examiner clarify his position with regard to the control signals of the Hasebe patent. In particular, is it the Examiner’s continued position that control signals are equivalent to audio signals? If this is the case, Applicant further requests that the Examiner please explain why would a patent, such as Hasebe, use different terms (i.e., control signals as output for certain components and audio (tone) signals as output for other components) to refer to the same signal? If these terms mean the same thing, then why would anyone, such as Hasebe, use both terms to describe the same signal?

To be clear, it is, and always has been, Applicant’s position that control signals and audio signals are different types of signals. This is a distinction that is a firmly accepted convention in audio engineering and MIDI systems, for example. Applicant is unaware of even a single example that can be found anywhere in the literature for construing a control signal as an audio

signal, and multitudes of examples to the contrary. Appellant looks forward to the Examiner's clarification on this point.

#### **“Output signal interface”**

Claim 1 further recites “an output signal interface for providing said audio output signal for each of said plurality of signal processors.” A quick glance at the asserted Fig. 3 of Hasebe reveals a clear distinction between Hasebe and claim 1.

The Office Action indicated that output terminal 23 of Hasebe teaches the claimed “output signal interface.” Recall that the signal at issue is the audio output signal which, according to the Office Action, is provided by the output of the envelope and pitch detection sections 12-15. For the moment, Applicant assumes *arguendo* that sections 12-15 do provide the claimed “audio output signal.”

The question then raised is how can output terminal 23 provide the audio output signal from sections 12-15 when such components are separated by other components (e.g., control section 16, tone generation section 17, signal processing section 19, MIDI converter section 18, and several others) which do not permit the so called audio output signal to reach the output terminal 23. The correct answer is that it does not. The output from sections 12-15 never even remotely reaches output terminal 23, and thus, output terminal 23 cannot provide such output for each of the sections 12-15.

#### **Output signal interface does not provide output for each of the signal processors**

Additionally, claim 1 recites “an output signal interface for providing said audio output signal for each of said plurality of signal processors.” Page 2 of the Office Action relies upon

pitch and envelope detection sections 12, 13, 14, and 15 of Hasebe as teaching the plurality of signal processors of the claim. As described above, output from sections 12-15 never even remotely reaches output terminal 23, and thus, output terminal 23 cannot provide such output for each of the sections 12-15. The Examiner's position fails and is traversed on this aspect alone.

#### **“Variably changing”**

Claim 1 also recites “wherein said processing of said received incoming audio electrical signal is performed by variably changing one or more signal attributes of said received incoming audio electrical signal.” Recall that page 2 of the Office Action relies upon detection sections 12, 13, 14, and 15 of Hasebe as teaching the claimed “processing.”

Applicant's review of Hasebe reveals nothing with regard to the detection sections 12-15 providing anything relating to the identified “variably changing.” Applicant assumes, for the sake of argument that the detection sections 12-15 change one or more signal attributes of a received incoming audio signal. Even if true, Hasebe provides nothing about “variably changing.” Moreover, the Office Action is silent as to the particular portion of the Hasebe patent which purportedly provides this feature.

Applicant therefore submits that Hasebe does not teach or suggest this feature. In the event that the rejection is maintained, Applicant respectfully requests that the Examiner specifically identify the portion of Hasebe relied upon to support the rejection.

#### **Summary**

In view of the foregoing, Hasebe fails to teach or suggest a number of features recited in claim 1, and therefore this claim is believed to be patentable. Independent claims 23, 45, 62, 79,

and 91 include language similar to that of claim 1, and thus, are each believed to be patentable for reasons similar to those discussed with regard to claim 1. The pending dependent claims are believed to be patentable at least by virtue of their respective dependence on the patentable independent claims.

### **CONCLUSION**

It is believed that this application should be in condition for allowance, and early and favorable action is courteously solicited.

Respectfully submitted,

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By: /Jeffrey J. Lotspeich/  
Jeffrey J. Lotspeich  
Registration No. 45,737  
Attorney for Applicant

Address all correspondence to:

**FITCH, EVEN, TABIN & FLANNERY**  
120 So. LaSalle Street, Ste. 1600  
Chicago, IL 60603

Direct telephone inquiries to:

Jeffrey J. Lotspeich  
(858) 587-7652  
San Diego, California Office of  
**FITCH, EVEN, TABIN & FLANNERY**